

Technic Inc.

Customer Spotlight



KEY FACTS

Customer

- Technic Inc.

Location

- Woonsocket, RI

A Global Supplier of:

- Specialty Chemicals
- Custom Finishing Equipment
- Engineered Powders & More

Equipment

2x HI902C2 Automatic Potentiometric Titration Systems

HI5222 Laboratory Research Grade Two Channel Benchtop pH/mV/ISE Meter w/ HI4101 Ammonia Combination Ion-Selective Electrode (ISE) and HI4113 Nitrate Combination ISE

Titration Equipment Methods:

- Argentometric Titration (Ag^+)
- Sulfate (SO_4^{2-})
- Ammonia (NH_3)

A Global Leader in Specialty Chemistry, Equipment and Analytical Tools

Technic Inc. is a Rhode Island based corporation with over 950 employees worldwide. For over 75 years, Technic has been a global supplier of specialty chemicals, custom finishing equipment, engineered powders, and analytical control systems to the semiconductor, electrical components, printed circuit board, industrial finishing, and decorative industries.

Technic Utilizes Hanna Instruments for Critical Testing

Technic is also a major supplier of engineered metal powders to the solar industry. Within this sector, the production and wastewater processes are closely monitored to ensure both local and federal regulations are met. As the metal powders are produced, they are analyzed for purity by automatic titration. Because of the nature of the production by-products, Technic's wastewater must be pretreated onsite prior to discharge into the municipal collection system. Technic utilizes a combination of automatic titration and ion-selective electrode direct measurement for compliance testing.

Production Monitored by Automatic Titration

Making decisions regarding the monitoring of industrial product quality should not be taken lightly. Quality managers must make a choice between sending samples out to a third-party lab for testing, bringing a test in-house, or not testing certain parameters. Many factors must be considered when making this decision, such as the turnaround time for results, the cost per analysis, and most importantly, the business impact if the test is performed incorrectly or not performed at all.



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Without proper analysis on the product, the company risks a lack of customer retention and loss of accreditation relevant to their specific industry. Though an in-house analysis sometimes involves a larger initial investment, it will decrease both the time it takes to get a result, as well as the cost per test.

“We have a wastewater treatment facility here and obviously, we want to make sure our water is clean. Hanna’s titrator helps us test the water, so that we can properly treat it.”

– Justin Lloyd, QA Lab Manager at Technic.



Prior to working with Hanna Instruments, Technic was analyzing their final silver powder by manual titration with an expensive titrant and a color indicator. Though the manual titration procedure was simple and allowed them to obtain results much quicker than third-party analysis, manually assessing a color change was subjective based on the operator performing the test and caused variance in both the accuracy and repeatability of the test results. Hanna partnered with Technic to develop and validate an automated titration method for their silver concentration using an alternative, nonhazardous titrant. By purchasing an automatic titrator for their production facility and automating this test using the method provided by Hanna Instruments, the accuracy and repeatability was greatly increased by the operator and the use of a problematic, hazardous chemical was no longer required.

Wastewater Compliance Through Multi-Instrument Analysis

The National Pollutant Discharge Elimination System (NPDES) permit program addresses water discharge by regulating point sources that discharge to waters of the United States. One area within this program is designated for industrial wastewater, where discharge

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“We need to have instruments that everyone can use. With Hanna instruments, you only press a few buttons to get your results. That’s what I like about Hanna titrators.”

– Justin Lloyd, QA Lab Manager at Technic.



limits for specified chemical components are mandated in order to maintain the health of the local wastewater treatment plant. As a responsible industrial concern, Technic continually strives to improve discharge quality to the municipal collection system.

To ensure treatment efficiency and to maintain compliance, Technic purchased a second Hanna automatic titrator and a professional grade benchtop meter. The titrator was utilized to test the strength of an alkaline reagent used in their wastewater treatment process for metal removal, as well as for testing pre and post treated waste stream for other ionic constituents. The professional grade benchtop meter enabled Technic to perform direct measurements for nitrate and ammonia on their wastewater influent and effluent to ensure proper nitrogen removal from their wastewater.

Simple and Easy to Use

For Technic, it was imperative that the testing equipment be straight forward and user-friendly so that any technician could easily navigate the menu and perform the required tests. Prior to working with Hanna Instruments, Technic had experienced complicated menu structures and testing procedures, as well as significantly higher instrument costs. Hanna was not only able to provide affordable and reliable instrumentation for their testing needs, but efficient and effective technical assistance when needed. Technic relies on Hanna Instruments on a regular basis and in their day-to-day operations. Having the capabilities to perform these tests in-house ensures an accurate, consistent, and cost-effective solution for Technic, which provides piece of mind that they will be able to meet any and all regulatory requirements. ■